

# American Journal of Physiology: Renal Physiology

No. 1. JULY 1998

Neuropeptide Y shifts equilibrium between $\alpha$ - and $\beta$ -adrenergic tonus in proximal tubule cells <i>U. Holtbäck, Y. Ohtomo, P. Förberg, B. Sahlgren, and A. Aperia</i>	F1
Vascular and glomerular expression of endothelin-1 in normal human kidney <i>W. H. Herman, S. N. Emancipator, R. L. P. Rhoten, and M. S. Simonson</i>	F8
Dietary salt enhances glomerular endothelial nitric oxide synthase through TGF- $\beta$ 1 <i>W.-Z. Ying and P. W. Sanders</i>	F18
Expression of a hypotonic swelling-activated Cl conductance during ontogeny of collecting duct epithelium <i>S. M. Huber and M. F. Horster</i>	F25
Effect of norepinephrine on intracellular pH in kidney proximal tubule: role of $\text{Na}^+$ -( $\text{HCO}_3^-$ ) <sub>n</sub> cotransport <i>S. Abdunour-Nakhoul, R. N. Khuri, and N. L. Nakhoul</i>	F33
Effect of dietary salt on neuronal nitric oxide synthase in the inner medullary collecting duct <i>A. Rocznik, J. Zimpelmann, and K. D. Burns</i>	F46
Effects of dietary salt on adrenomedullin and its receptor mRNAs in rat kidney <i>B. L. Jensen, S. Gambaryan, E. Schmaus, and A. Kurtz</i>	F55
Dopamine inhibits vasopressin-dependent cAMP production in the rat cortical collecting duct <i>L. Li and J. A. Schafer</i>	F62
Renal handling of circulating nitrates in anesthetized dogs <i>M. Godfrey and D. S. A. Majid</i>	F68
Endogenous angiotensin II modulates rat proximal tubule transport with acute changes in extracellular volume <i>A. Quan and M. Baum</i>	F74
Immunolocalization of sat-1 sulfate/oxalate/bicarbonate anion exchanger in the rat kidney <i>L. P. Karniski, M. Lötscher, M. Fucntese, H. Hilfiker, Jürg Biber, and H. Murer</i>	F79
Low-salt diet downregulates plasma but not tissue kallikrein-kinin system <i>U. Hilgenfeldt, T. Puschner, U. Riester, J. Finsterle, J. Hilgenfeldt, and E. Ritz</i>	F88
Low-NaCl diet increases H-K-ATPase in intercalated cells from rat cortical collecting duct <i>R. B. Silver, H. Choe, and G. Frindt</i>	F94
Activation of purinergic P2Y2 receptors inhibits inducible NO synthase in cultured rat mesangial cells <i>M. G. Mohaupt, T. Fischer, J. Schwöbel, R. B. Sterzel, and E. Schulze-Lohoff</i>	F103
Expression of multiple $\alpha$ -adrenoceptor isoforms in rat CCD <i>T. W. Wilborn, D. Sun, and J. A. Schafer</i>	F111
Ligand-dependent regulation of NPR-A gene expression in inner medullary collecting duct cells <i>L. Cao, S. C. Chen, T. Cheng, M. H. Humphreys, and D. G. Gardner</i>	F119
Dynamic autoregulation in the in vitro perfused hydronephrotic rat kidney <i>W. A. Cupples and R. D. Loutzenhiser</i>	F126
Expression of synaptotagmin VIII in rat kidney <i>B. K. Kishore, J. B. Wade, K. Schorr, T. Inoue, B. Mandon, and M. A. Knepper</i>	F131
Cadmium is more toxic to LLC-PK <sub>1</sub> cells than to MDCK cells acting on the cadherin-catenin complex <i>L. B. Zimmerhackl, F. Momm, G. Wiegele, and M. Brandis</i>	F143

Chronic renal failure in a mouse model of human adenine phosphoribosyltransferase deficiency <i>M. G. Stockelman, J. N. Lorenz, F. N. Smith, G. P. Boivin, A. Sahota, J. A. Tischfield, and P. J. Stambrook</i>	F154
Direct visualization of renal vascular morphogenesis in <i>Flk1</i> heterozygous mutant mice <i>B. Robert, P. L. St. John, and D. R. Abrahamson</i>	F164
Activation of kininogen expression during distal nephron differentiation <i>S. S. El-Dahr, S. Dipp, I. V. Yosipiv, and L. A. Carhini</i>	F173

## No. 2. AUGUST 1998

### INVITED REVIEW

Phenotypic plasticity in the intercalated cell: the hensin pathway <i>Q. Al-Awqati, S. Vijayakumar, C. Hikita, J. Chen, and J. Takito</i>	F183
<hr/>	
Natriuretic and kaliuretic activities of guanylin and uroguanylin in the isolated perfused rat kidney <i>M. C. Fonteles, R. N. Greenberg, H. S. A. Monteiro, M. G. Currie, and L. R. Forte</i>	F191
Extracellular $Ca^{2+}$ decreases chloride reabsorption in rat CTAL by inhibiting cAMP pathway <i>M. C. de Jesus Ferreira and C. Bailly</i>	F198
Modulation of polymyxin B effects on mammalian urinary bladder <i>J. R. Berg, C. M. Spilker, and S. A. Lewis</i>	F204
Decreased vasopressin-mediated renal water reabsorption in rats with compensated liver cirrhosis <i>T. E. N. Jonassen, S. Nielsen, S. Christensen, and J. S. Petersen</i>	F216
Adrenergic- and capsaicin-evoked nitric oxide release from urothelium and afferent nerves in urinary bladder <i>L. A. Birder, G. Apodaca, W. C. de Groat, and A. J. Kanai</i>	F226
Chronic administration of furosemide augments renal weight and glomerular capillary pressure in normal rats <i>P. H. Lane, L. D. Tyler, and P. G. Schmitz</i>	F230
Cerebrospinal fluid formation and absorption in dehydrated sheep <i>A. Chodobski, J. Szymdynger-Chodobska, and M. J. McKinley</i>	F235
Differential regulation of ROMK expression in kidney cortex and medulla by aldosterone and potassium <i>H. Wald, H. Garty, L. G. Palmer, and M. M. Popovtzer</i>	F239
Myeloma light chains are ligands for cubilin (gp280) <i>V. Batuman, P. J. Verroust, G. L. Navar, J. H. Kaysen, F. O. Goda, W. C. Campbell, E. Simon, F. Pontillon, M. Lyles, J. Bruno, and T. G. Hammond</i>	F246
Evidence that calgranulin is produced by kidney cells and is an inhibitor of calcium oxalate crystallization <i>S. N. Pillay, J. R. Asplin, and F. L. Coe</i>	F255
Thromboxane $A_2$ modulates the fibrinolytic system in glomerular mesangial cells <i>T. M. Coffman, R. F. Spurney, R. B. Mannon, and R. Levenson</i>	F262
Regulation of expression of type II sodium-phosphate cotransporters by protein kinases A and C <i>E. D. Lederer, S. S. Sohi, J. M. Mathiesen, and J. B. Klein</i>	F270
An oligonucleotide decoy for transcription factor E2F inhibits mesangial cell proliferation in vitro <i>N. Tomita, M. Horiuchi, S. Tomita, G. H. Gibbons, J. Y. S. Kim, D. Baran, and V. J. Dzau</i>	F278
Acute effects of vasopressin $V_2$ -receptor antagonist on kidney AQP2 expression and subcellular distribution <i>B. Mønsther Christensen, D. Marples, U. B. Jensen, J. Frøkiaer, D. Sheikh-Hamad, M. Knepper, and S. Nielsen</i>	F285

Cloning, functional characterization, and localization of a rat renal Na <sup>+</sup> -dicarboxylate transporter <i>T. Sekine, S. H. Cha, M. Hosoyamada, Y. Kanai, N. Watanabe, Y. Furuta, K. Fukuda, T. Igarashi, and H. Endou</i>	F298
Identification of a novel <i>cis</i> -acting element for fibroblast-specific transcription of the <i>FSP1</i> gene <i>H. Okada, T. M. Danoff, A. Fischer, J. M. Lopez-Guisa, F. Strutz, and E. G. Neilson</i>	F306
<b>ANNOUNCEMENTS</b>	F315

### No. 3. SEPTEMBER 1998

#### BRIEF REVIEWS

##### Urinary Concentrating Mechanism

Introduction: Recent insights into the urinary concentrating mechanism: from cDNA cloning to modeling renal function <i>M. A. Hediger and M. A. Knepper</i>	F317
Urea transporters in kidney: molecular analysis and contribution to the urinary concentrating process <i>H. Tsukaguchi, C. Shayakul, U. V. Berger, and M. A. Hediger</i>	F319
Roles of Na-K-2Cl and Na-Cl cotransporters and ROMK potassium channels in urinary concentrating mechanism <i>S. C. Hebert</i>	F325
Cellular mechanisms of aquaporin trafficking <i>D. Brown, T. Katsura, and C. E. Gustafson</i>	F328
Long-term regulation of urinary concentrating capacity <i>M. A. Knepper</i>	F332
Functional and molecular characterization of luminal and basolateral Cl <sup>-</sup> /HCO <sub>3</sub> <sup>-</sup> exchangers of rat thick limbs <i>D. Eladari, A. Blanchard, F. Leviel, M. Paillard, A. K. Stuart-Tilley, S. L. Alper, and R.-A. Podevin</i>	F334
Bradykinin stimulates the ERK→Elk-1→Fos/AP-1 pathway in mesangial cells <i>S. S. El-Dahr, S. Dipp, and W. H. Baricos</i>	F343
Mg <sup>2+</sup> /Ca <sup>2+</sup> sensing inhibits hormone-stimulated Mg <sup>2+</sup> uptake in mouse distal convoluted tubule cells <i>B. W. Bapty, L.-J. Dai, G. Ritchie, L. Canaff, G. N. Hendy, and G. A. Quamme</i>	F353
PMA and staurosporine affect expression of the PCK gene in LLC-PK <sub>1</sub> -F <sup>+</sup> cells <i>W. Liu, E. Feifel, T. Holcomb, X. Liu, N. Spitaler, G. Gstraunthaler, and N. P. Curthoys</i>	F361
Contribution of 20-HETE to the vasodilator actions of nitric oxide in renal arteries <i>M. Alonso-Galicia, C.-W. Sun, J. R. Falck, D. R. Harder, and R. J. Roman</i>	F370
Immunolocalization of the Na <sup>+</sup> /H <sup>+</sup> exchanger isoform NHE2 in rat kidney <i>R. Chambrey, D. G. Warnock, R.-A. Podevin, P. Bruneval, C. Mandet, M.-F. Bélaïr, J. Bariéty, and M. Paillard</i>	F379
Functional activity of epidermal growth factor receptors in autosomal recessive polycystic kidney disease <i>W. E. Sweeney, Jr., and E. D. Avner</i>	F387
Neuronal nitric oxide synthase is expressed in principal cell of collecting duct <i>X. Wang, M. Lu, Y. Gao, A. Papapetropoulos, W. C. Sessa, and W. Wang</i>	F395
Dehydration reverses vasopressin antagonist-induced diuresis and aquaporin-2 downregulation in rats <i>D. Marples, B. Mønster Christensen, J. Frøkiaer, M. A. Knepper, and S. Nielsen</i>	F400

- Neutral endopeptidase inhibition potentiates the natriuretic actions of adrenomedullin  
*O. Lisy, M. Jougasaki, J. A. Schirger, H. H. Chen, P. T. Barclay, and J. C. Burnett, Jr.* F410
- Partially active channels produced by PKA site mutation of the cloned renal K<sup>+</sup> channel, ROMK2 (kir1.2)  
*G. G. MacGregor, J. Z. Xu, C. M. McNicholas, G. Giebisch, and S. C. Hebert* F415
- Endothelin-1-induced mesangial cell contraction involves activation of protein kinase C- $\alpha$ , - $\delta$ , and - $\epsilon$   
*J. A. Dlugosz, S. Munk, X. Zhou, and C. I. Whiteside* F423
- Expression of HK $\alpha_2$  protein is increased selectively in renal medulla by chronic hypokalemia  
*J. Codina, J. T. Delmas-Mata, and T. D. DuBose, Jr.* F433
- Reflex effects on components of synchronized renal sympathetic nerve activity  
*G. F. DiBona and S. Y. Jones* F441
- Urea and NaCl differentially regulate FAK and RAFTK/PYK2 in mIMCD3 renal medullary cells  
*Z. Zhang, H. Avraham, and D. M. Cohen* F447
- Peptide YY inhibits vasopressin-stimulated chloride secretion in inner medullary collecting duct cells  
*C. M. Breen, P. J. Mannon, and B. A. Benjamin* F452
- Regulation of human mesangial cell collagen expression by transforming growth factor- $\beta$ 1  
*A.-C. Poncelet and H. W. Schnaper* F458

#### No. 4. OCTOBER 1998

##### INVITED REVIEW

- Relevance of extracellular matrix, its receptors, and cell adhesion molecules in mammalian nephrogenesis  
*E. I. Wallner, Q. Yang, D. R. Peterson, J. Wada, and Y. S. Kanwar* F467
- 
- Hypertonicity activates MAP kinases and inhibits HCO<sub>3</sub><sup>-</sup> absorption via distinct pathways in thick ascending limb  
*B. A. Watts III, J. F. Di Mari, R. J. Davis, and D. W. Good* F478
- Activation of H<sup>+</sup>-ATPase by hypotonicity: a novel regulatory mechanism for H<sup>+</sup> secretion in IMCD cells  
*H. Amlal, A. Goel, and M. Soleimani* F487
- Bradykinin may be involved in neuropeptide Y-induced diuresis, natriuresis, and calciuresis  
*A. Bischoff, W. Rascher, and M. C. Michel* F502
- Immunochemical characterization of Na<sup>+</sup>/H<sup>+</sup> exchanger isoform NHE4  
*J. H. Pizzonia, D. Biemesderfer, A. K. Abu-Alfa, M.-S. Wu, M. Exner, P. Isenring, P. Igarashi, and P. S. Aronson* F510
- Inducible transcriptional activity of bcn-1 element from laminin  $\gamma$ 1-chain gene promoter in renal and nonrenal cells  
*H. Suzuki, O. N. Denisenko, Y. Suzuki, D. S. Schullery, and K. Bomsztyk* F518
- Differential expression, abundance, and regulation of Na<sup>+</sup>-phosphate cotransporter genes in murine kidney  
*H. S. Tenenhouse, S. Roy, J. Martel, and C. Gauthier* F527
- Characterization of angiotensin IV-degrading enzymes and receptors on rat mesangial cells  
*D. Chansel, S. Czekalski, S. Vandermeersch, E. Ruffet, M.-C. Fournié-Zaluski, and R. Ardaillou* F535
- Dietary K<sup>+</sup> restriction upregulates total and Sch-28080-sensitive bicarbonate absorption in rat tIMCD  
*S. M. Wall, P. Mehta, and T. D. DuBose, Jr.* F543

Cloning, characterization, and gene organization of K-Cl cotransporter from pig and human kidney and <i>C. elegans</i> <i>E. J. Holtzman, S. Kumar, C. A. Faaland, F. Warner, P. J. Logue, S. J. Erickson, G. Ricken, J. Waldman, S. Kumar, and P. B. Dunham</i>	F550
Redistribution of Na <sup>+</sup> /H <sup>+</sup> exchanger isoform NHE3 in proximal tubules induced by acute and chronic hypertension <i>K.-P. Yip, C.-M. Tse, A. A. McDonough, and D. J. Marsh</i>	F565
Effects of antihypertensive drugs on autoregulation of RBF and glomerular capillary pressure in SHR <i>F. I. Kvam, J. Ofstad, and B. M. Iversen</i>	F576
Inactivation of kinase cascades in mesangial cells grown on collagen type I <i>T. Miralem and D. M. Templeton</i>	F585
Cyclosporin A increases hypoxia and free radical production in rat kidneys: prevention by dietary glycine <i>Z. Zhong, G. E. Arteel, H. D. Connor, M. Yin, M. v. Frankenberg, R. F. Stachlewitz, J. A. Raleigh, R. P. Mason, and R. G. Thurman</i>	F595
Cyclooxygenase-2 participates in tubular flow-dependent afferent arteriolar tone: interaction with neuronal NOS <i>A. Ichihara, J. D. Imig, E. W. Inscho, and L. G. Navar</i>	F605
Selective increase of cyclooxygenase-2 expression in a model of renal ablation <i>J.-L. Wang, H.-F. Cheng, M.-Z. Zhang, J. A. McKanna, and R. C. Harris</i>	F613

## No. 5. NOVEMBER 1998

### ACUTE RENAL FAILURE FORUM

Acute renal failure. I. Relative importance of proximal vs. distal tubular injury <i>W. Lieberthal and S. K. Nigam (Editors)</i>	F623
---	------

### INVITED REVIEW

Isozymes of the Na-K-ATPase: heterogeneity in structure, diversity in function <i>G. Blanco and R. W. Mercer</i>	F633
Chloride currents in primary cultures of rabbit proximal and distal convoluted tubules <i>I. Rubera, M. Tauc, M. Bidet, C. Poujeol, B. Cuiller, A. Watrin, N. Touret, and P. Poujeol</i>	F651
Inhibitory effect of calyculin A, a Ser/Thr protein phosphatase type I inhibitor, on renin secretion <i>C. S. Park, M. H. Kim, C. H. Leem, Y. J. Jang, H. W. Kim, H. S. Kim, and Y. S. Hong</i>	F664
Cycles and separations in a model of the renal medulla <i>S. R. Thomas</i>	F671
Role of superoxide in apoptosis induced by growth factor withdrawal <i>W. Lieberthal, V. Triaca, J. S. Koh, P. J. Pagano, and J. S. Levine</i>	F691
Transport and regulatory properties of the apical Na-K-2Cl cotransporter of macula densa cells <i>M. A. Laamarti, P. D. Bell, and J.-Y. Lapointe</i>	F703
Isolation of rat fibrillin-1 cDNA and its relevance in metanephric development <i>Y. S. Kanwar, K. Ota, Q. Yang, A. Kumar, J. Wada, N. Kashiwara, and D. R. Peterson</i>	F710
Reduced AQP1, -2, and -3 levels in kidneys of rats with CRF induced by surgical reduction in renal mass <i>T.-H. Kwon, J. Frøkiaer, M. A. Knepper, and S. Nielsen</i>	F724
Dopamine D <sub>4</sub> receptor isoform mRNA and protein are expressed in the rat cortical collecting duct <i>D. Sun, T. W. Wilborn, and J. A. Schafer</i>	F742
SNAP-23 in rat kidney: colocalization with aquaporin-2 in collecting duct vesicles <i>T. Inoue, S. Nielsen, B. Mandon, J. Terris, B. K. Kishore, and M. A. Knepper</i>	F752



Intrarenal and subcellular localization of rat CLC5 <i>V. A. Luyckx, F. O. Goda, D. B. Mount, T. Nishio, A. Hall, S. C. Hebert, T. G. Hammond, and A. S. L. Yu</i>	F761
Expression of Grb7 growth factor receptor signaling protein in kidney development and in adult kidney <i>S. F. Leavey, L. J. Arend, H. Dare, G. R. Dressler, J. P. Briggs, and B. L. Margolis</i>	F770
Dietary lipids regulate $\beta$ -oxidation enzyme gene expression in the developing rat kidney <i>F. Ouali, F. Djouadi, C. Merlet-Bénichou, and J. Bastin</i>	F777
Protein kinase C regulation of p-glycoprotein-mediated xenobiotic secretion in renal proximal tubule <i>D. S. Miller, C. R. Sussman, and J. L. Renfro</i>	F785
Aquaporin-2 expression in primary cultured rat inner medullary collecting duct cells <i>K. Maric, A. Oksche, and W. Rosenthal</i>	F796
Morphological and functional characterization of a conditionally immortalized collecting tubule cell line <i>M. Takacs-Jarrett, W. E. Sweeney, E. D. Avner, and C. U. Cotton</i>	F802
Renal cortical $\text{Na}^+$ - $\text{K}^+$ -ATPase activity and abundance is decreased in normal pregnant rats <i>J. Mahaney, C. Felton, D. Taylor, W. Fleming, J. Q. Kong, and C. Baylis</i>	F812
A tyrosine-based signal regulates H-K-ATPase-mediated potassium reabsorption in the kidney <i>T. Wang, N. Courtois-Coutry, G. Giebisch, and M. J. Caplan</i>	F818
Increased decorin mRNA in diabetic mouse kidney and in mesangial and tubular cells cultured in high glucose <i>A. Mogyrosi and F. N. Ziyadeh</i>	F827
$\text{PGE}_2$ stimulates $\text{Mg}^{2+}$ uptake in mouse distal convoluted tubule cells <i>L.-J. Dai, B. Bapty, G. Ritchie, and G. A. Quamme</i>	F833
Chronic metabolic acidosis reversibly inhibits extracellular matrix gene expression in mouse osteoblasts <i>K. K. Frick and D. A. Bushinsky</i>	F840

## No. 6. DECEMBER 1998

### INVITED REVIEW

Role of nitric oxide in the control of renin secretion <i>A. Kurtz and C. Wagner</i>	F849
<hr/>	
Effects of okadaic acid, calyculin A, and PDBu on state of phosphorylation of rat renal $\text{Na}^+$ - $\text{K}^+$ -ATPase <i>D. Li, S. X. J. Cheng, G. Fisone, M. J. Caplan, Y. Ohtomo, and A. Aperia</i>	F863
Human renal and systemic hemodynamic, natriuretic, and neurohumoral responses to different doses of L-NAME <i>A. Broere, A. H. van den Meiracker, F. Boomsma, F. H. M. Derkx, A. J. Man in't Veld, and M. A. D. H. Schalekamp</i>	F870
Upregulation of $\text{H}^+$ -ATPase in the distal nephron during potassium depletion: structural and functional evidence <i>M. A. Bailey, R. M. Fletcher, D. F. Woodrow, R. J. Unwin, and S. J. Walter</i>	F878
Ultrastructural localization of Na-K-2Cl cotransporter in thick ascending limb and macula densa of rat kidney <i>S. Nielsen, A. B. Maunsbach, C. A. Ecelbarger, and M. A. Knepper</i>	F885
Extracellular matrix-related genes in kidney after ischemic injury: potential role for TGF- $\beta$ in repair <i>D. P. Basile, D. R. Martin, and M. R. Hammerman</i>	F894

Prostanoid signaling, localization, and expression of IP receptors in rat thick ascending limb cells <i>R. L. Hébert, T. O'Connor, C. Neville, K. D. Burns, O. Laneuville, and L. N. Peterson</i>	F904
Effects of physiological hyperinsulinemia on systemic, renal, and hepatic substrate metabolism <i>C. Meyer, J. Dostou, V. Nadkarni, and J. Gerich</i>	F915
Inhibition of adenosine-1 receptor-mediated preglomerular vasoconstriction in AT <sub>1A</sub> receptor-deficient mice <i>T. Traynor, T. Yang, Y. G. Huang, L. Arend, M. I. Oliverio, T. Coffman, J. P. Briggs, and J. Schnermann</i>	F922
Kid-1 expression is high in differentiated renal proximal tubule cells and suppressed in cyst epithelia <i>R. Witzgall, N. Obermüller, U. Böhlitz, J. P. Calvet, B. D. Cowley, Jr., C. Walker, W. Kriz, N. Gretz, and J. V. Bonventre</i>	F928
Regulation of c-ret expression by retinoic acid in rat metanephros: implication in nephron mass control <i>E. Moreau, J. Vilar, M. Lelièvre-Pégorier, C. Merlet-Bénichou, and T. Gilbert</i>	F938
Concerted actions of IL-1 $\beta$ inhibit Na <sup>+</sup> absorption and stimulate anion secretion by IMCD cells <i>R. F. Husted, C. Zhang, and J. B. Stokes</i>	F946
Urinary concentrating function in mice lacking EP <sub>3</sub> receptors for prostaglandin E <sub>2</sub> <i>E. F. Fleming, K. Athirakul, M. I. Oliverio, M. Key, J. Goulet, B. H. Koller, and T. M. Coffman</i>	F955
Extracellular ATP causes apoptosis and necrosis of cultured mesangial cells via P2Z/P2X <sub>7</sub> receptors <i>E. Schulze-Lohoff, C. Hugo, S. Rost, S. Arnold, A. Gruber, B. Brüne, and R. B. Sterzel</i>	F962
pH-dependent modulation of the cloned renal K <sup>+</sup> channel, ROMK <i>C. M. McNicholas, G. G. MacGregor, L. D. Islas, Y. Yang, S. C. Hebert and G. Giebisch</i>	F972
Adaptation of the outer medullary collecting duct to metabolic acidosis in vitro <i>S. Tsuruoka and G. J. Schwartz</i>	F982
Isolated superfused juxtaglomerular cells from rat kidney: a model for study of renin secretion <i>M. Albinus, E. Finkbeiner, B. Sosath, and H. Osswald</i>	F991

---

## SPECIAL COMMUNICATION

Regulation of sodium transport in M-1 cells <i>N. L. Nakhoul, K. S. Hering-Smith, C. T. Gambala, and L. L. Hamm</i>	F998
--	------

---

The Journal no longer publishes print subject and author indexes. Full searchability is available in the online version (<http://www.ajprenal.org>).